Search Notes	

Application No.	Applicant(s)		
09/705,844	OSHIMA, MITSUAK		
Examiner	Art Unit		
Amanda Tile	2634		

SEARCHED ·			
Class	Subclass Date		Examiner
		8,17.04	288
Uplatin	r Cealle	श्रीकोल्ड बार्चिक	OH
Updat	-	15/06	DH
* Updat	ĘĮ	11/02/06	174
* Updo	te	6/17/07	. DH
	·		
		•	
			-
		•	•

INTERFERENCE SEARCHED					
Class	Subclass	Date	Examiner		
94 Some	as abo	6/17/07	D24		
Liti			100		
			•		

SEARCH NOTES (INCLUDING SEARCH STRATEGY)				
	DATE	EMR		
EAST	814.04	2k		
·				
		·		
	·			

US 7,158,577 B1 Page 2

H.C. DATENET	DOCUMENTS	5.50	66.026	A 10/1	006	Davina et al	
U.S. PAIENI	DOCUMENTS		55,926 55,932			Bryan et al. Gitta et al.	
4,227,152 A 10/1980	Godard et al.		76,902			Lane et al.	,
	Craiglow		98,220			Citta et al.	
	Armstrong		00,672			Oshima et al.	
	Stephens et al.		38,112			Bestler et al.	
	Marti et al.		02,241			Oshima	
4,309,726 A 1/1982	Tanaka et al.		19,000			Oshima	
4,525,846 A 6/1985	Bremer et al.		92,879			Oshima	
4,535,352 A 8/1985	Haskell		99,569			Oshima	
4,564,858 A 1/1986	Resch		49,651			Oshima	
4,581,639 A 4/1986	Judge		56,357			Oshima	
4,597,090 A 6/1986	Forney, Jr.	2005/00	•			Epstein et al.	
4,601,045 A 7/1986	Lubarsky	2005/00				Wang et al.	
4,630,287 A 12/1986	Armstrong						
4,636,876 A 1/1987	Schwartz		FO	REIGN P.	ATE	NT DOCUME	NTS
4,751,478 A 6/1988	Yoshida	~ ·				# /0.00 A	
4,769,819 A 9/1988	Matsutani et al.	CN		1499725		5/2004	
4,794,447 A 12/1988	Tsinberg	CN		2627574		7/2004	
4,800,426 A 1/1989	Glenn	CN		1569334		1/2005	
4,817,192 A 3/1989	Phillips et al.	EP		0031193		7/1981	
4,855,692 A 8/1989	Kennard et al.	EP		0122805		10/1984	
4,873,701 A 10/1989	Tretter	EP		0282298		9/1988	
4,891,806 A 1/1990	Farias et al.	EP		0311188		4/1989	
	Parker	EP		0329158		8/1989	
4,912,706 A 3/1990	Eisenberg et al.	EP		0365431		4/1990	
4,914,655 A 4/1990	Johannes et al.	EP		0392538		10/1990	
4,918,437 A 4/1990	Jasinski et al.	EP		0448492	Αl	9/1991	
4,937,844 A 6/1990	Kao	EP		0485105		5/1992	
4,940,954 A 7/1990	Aubert et al.	EP		0485108	AZ	5/1992	
4,958,360 A 9/1990	Sari	EP		0490552		6/1992	
5,007,088 A 4/1991	Ooi et al.	EP		0506400		9/1992	
5,018,198 A * 5/1991	Takahashi 380/38	EP		0525641		2/1993	
5,023,889 A 6/1991	Divsalar et al.	EP		0531046		3/1993	
5,029,003 A 7/1991	Jonnalagadda	EP		0540231	A2	5/1993	
5,038,219 A 8/1991	Yamashita et al.	EP		1528854		5/2005	
5,038,402 A 8/1991	Robbins	EP		1529838		5/2005	
5,050,188 A 9/1991	Dirr	GB		2 187 611		9/1987	
5,063,445 A 11/1991	Nishizawa et al.	Ъ		53-108215		9/1978	
	Higurashi	JP	•	53-137657		12/1978	
	Citta et al.	ъ		57-39629		3/1982	
	Citta et al.	Ъ		58-161427		9/1983	
5,105,442 A 4/1992		JP		58-161547		9/1983	
	Calderbank et al.	JР		61-70861		4/1986	
	Suwa et al.	JР	,	62-133842		6/1987	
	Azadegan et al.	JP JP		63-28145 63-180222		2/1988 7/1988	
	Basile et al.	JР					
5,136,380 A 8/1992			,	63-180280		7/1988	
	Kageyama et al.	JP TD		64-5135		1/1989	
	Kim et al.	JР		64-68144		3/1989	
*,,	Sako et al.	Љ Љ		64-74836 2-94814		3/1989	
5,164,963 A 11/1992	Lawrence et al.	JР				4/1990	
	Moose	JР		2-141049 2-154583		5/1990 6/1990	
	Nakamura et al.	JP		2-154383		6/1990	
	Hess et al.	JР		2-195732		8/1990	
	Citta et al.	JР		2-193732		8/1990	
	Halbert-Lassalle et al.	JP		2-260726		10/1990	
	Chung et al 714/758	JР		3-48587		3/1991	
	Sugiyama et al.	JР		3-69295		3/1991	
	Fazel et al.	JP		4-196822		7/1992	
5,243,629 A 9/1993		JР		5-75568		3/1993	
	Ramchandran et al.	JР		5-167633		7/1993	
	Basile et al.	JР		5-218978		8/1993	
	Hulyalkar et al.	JP		5-327807		12/1993	
5,311,547 A 5/1994							
	Fouche et al.	JP		7-79415		3/1995	
	Lane et al.	1b		7-99522		4/1995	
5,398,073 A 3/1995		ЛР TD		7-264148		10/1995	
	Scarpa	JР	200	7-322219		12/1995	
	Hulyalkar	JP	200	4-1591207		6/2004	
	Bannai et al.	UA		52118		12/2002	
	Oshima	WO		85/04541		10/1985	
5,561,468 A 10/1996	Bryan et al.	wo		86/07223		12/1986	

wo	89/08366	9/1989
wo	91/20137	12/1991
WO	92/14343	8/1992
wo	92/22162	12/1992

OTHER PUBLICATIONS

J. A. C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come", IEEE Communications Magazine, vol. 28, May 1990, pp. 5-8 and 11-14.

B. Hirosaki, "An Orthogonally Multiplexed QAM System Using the Discrete Fourier Transform", IEEE Transactions on Communications, vol. Com-29, No. 7, Jul. 1981, pp. 982-989.

L. J. Cimini, Jr., "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing", IEEE Transactions on Communications, vol. Com-33, No. 7, Jul. 1985, pp. 665-675 and Annex.

Shigeki Moriyama et al., "Delay Propagation Characteristics at VHF and UHF bands in Urban Area", 1991 Spring National Convention Record, The Institute of Electronics, Information and Communication Engineers, Part 2, p. 406, Mar. 15, 1991.

Yasuhiro Ito et al., "Adaptive Weighted Code Division Multiplexing (AW-CDM) Transmission System for Terrestrial Digital Television Broadcasting", ITE Technical Report vol. 17, No. 13, pp 27-32, Feb. 25, 1993.

Masafumi Saito et al., "Bit Error Rate Characteristics of OFDM in Multipath Environment", 1991.

Ryutaro Ohmoto et al., "π/4-shift QPSK Subcarrier Transmission", 1991.

Shinji Matsumoto et al., "200 Mb/s 16 QAM Digital Radio-Relay System Operating in 4 and 5 GHz Bands", Japan Telecommunications Review, Jan. 1982, vol. 24, No. 1, pp. 65-73.

M. Pecot et al., "Compatible Coding of Television Images, Part 2. Compatible System", Signal Processing Image Communication, Oct. 2, 1990, No. 3, pp. 259-268.

Mitsuaki Oshima, "Constellation-Code Division Multiplex for

Mitsuaki Oshima, "Constellation-Code Division Multiplex for Digital HDTV", IEEE, 1992, pp. 1086-1092.

Tricia Hill et al., "A Performance Study of NLA 64-State QAM", IEEE Transactions on Communications, vol. COM-31, Jun. 1983, No. 6, pp. 821-826.

Hideki Ishio et al., "A Proposal of a Carrier Digital Transmission System Using Multi-Level APSK", pp. 1-20.

Khaled Fazel et al., Combined multilevel coding and multiresolution modulation, Feb. 8, 1993, pp. 1081-1085.

P. Hocher et al., Performance of an RCPC-Coded OFDM-based Digital Audio Broadcasting (DAB) System, IEEE Global Telecommunications Conference "Globecom '91", Dec. 2-5, 1991, vol. 1 of 3, pp. 2.1.1-2.1.7.

K. M. Uz et al., Combined multiresolution source coding and modulation for digital broadcast of HDTV, 1992, pp. 283-292.

K. M. Uz et al., Multiresolution Source and Channel Coding for Digital Broadcast of HDTV, 1992, pp. 61-69.

Nambi Seshadri et al., Multi-Level Block Coded Modulations with Unequal Error Protection for the Rayleigh Fading Channel, vol. 4, No. 3, May-Jun. 1993, pp. 325-334.

William F. Schreiber, Spread-Spectrum Television Broadcasting, SMPTE, Journal, Aug. 1992, pp. 538-549.

Martin Vetterli et al., Multiresolution Coding Techniques for Digital Television: A Review, Multidimensional Systems and Signal Processing, vol. 3, May 1992, pp. 161-187.

Ezio Biglieri et al., Introduction to Trellis-Coded Modulation with Applications, Apr. 6, 1992, pp. 173-207.

English Language Abstract of European Patent No. 93 30 7575. Kazuhiko Nitadori, Synthesis of Multichannel Orthogonal VSB Signals by Quadrature Method, 1976 International Conference on Communications, Jun. 14-16, 1976, vol. 1, pp. 3-25-3-29.

Thomas M. Cover, Broadcast Channels, IEEE Transactions on Information Theory, Jan. 1972, pp. 2-14.

"Optimum Weighted PCM for Speech Signals", Sundberg, IEEE Transactions on Communications, vol. COM-26, No. 6, Jun. 1978, pp. 872-881.

* cited by examiner